

**HFS Theme Paper**

**DATA COLLECTION AS A POLICY TOOL:  
A DESCRIPTION OF HFS COLLECTION METHODS  
AND DATA SETS**

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**HEALTH FINANCING AND SUSTAINABILITY (HFS) PROJECT**

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## **ABSTRACT**

To carry out technical assistance and applied research activities to support health financing reform, the HFS Project collected a great deal of pertinent data from countries around the world. The Project has generated 38 data sets on the demand for and the supply of health care. This paper describes those data sets and provides information on the manner in which they were generated and used in the hope that it will benefit future researchers.

The paper seeks to answer (and is organized around) four questions:

- ▲ What type of data were collected and by what method?
- ▲ Why were the data needed and collected?
- ▲ How were the data used?
- ▲ How can the data be used in the future?

The paper also includes an appendix that describes each data set, the size and characteristics of the sample, and the survey instrument.

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## INTRODUCTION

The Health Financing and Sustainability (HFS) Project is a five-year initiative funded by the United States Agency for International Development (USAID). The project's mandate is to provide technical assistance, conduct applied research, implement training, and disseminate information on health care financing throughout the developing world. The project seeks to influence policy change by advancing knowledge; testing and improving delivery, financing, and administrative methods; strengthening institutional capacity; and enhancing technical capabilities. To date, HFS has been involved in health care financing activities in over 30 developing countries around the world.

HFS work has focused on five technical areas:

- ▲ alternative cost recovery systems for financial sustainability and improved equity and quality
- ▲ public and private sector collaboration in healthcare delivery
- ▲ social financing and insurance (risk-sharing mechanisms)
- ▲ resource allocation, use, and management
- ▲ costing delivery and production of healthcare services

Policymakers in the developing countries in which HFS operates often view changes in methods of health financing and organization with great skepticism. This attitude reflects the fact that such changes often carry significant political and economic implications. Further, many of the alternatives for health financing and organization on which the HFS Project focuses—such as implementing cost recovery or alternative methods of social financing, moving government hospitals toward greater autonomy—have not been widely tested in a developing country context.

To overcome these constraints and to find appropriate solutions, HFS technical assistance activities have been designed to provide decisionmakers with information based on data specific to their country. To promote the development of analytical skills, HFS has sought the active participation of host country personnel in the design and implementation of relevant data collection and analysis activities. This emphasis on country-specific analyses serves to both provide better data for decisionmaking and help build awareness of problems and support for needed changes.

In addition to responding to requests for technical assistance to specific countries, the HFS Project has a mandate to undertake a series of applied research studies to expand knowledge about alternative health financing and delivery policies more generally in developing countries. Local researchers often played an important role in this applied research.

To carry out both its technical assistance and its applied research activities, the HFS Project collected a great deal of pertinent data. The Project has generated some 38 data sets on the demand for and the supply of health care. This paper describes those data sets and provides information on the manner in which they were generated and used in the hope that it will benefit future researchers.

The paper seeks to answer (and is organized around) four questions:

- ▲ What type of data were collected and by what method?
- ▲ Why were the data needed and collected?
- ▲ How were the data used?
- ▲ How can the data be used beyond the HFS Project?

The paper also includes an appendix that describes each data set, the size and characteristics of the sample, and the survey instrument.

## DATA COLLECTION METHODS

The HFS Project collected, or assisted in the collection of, 38 data sets in 20 countries.<sup>1</sup> Data collection activities ranged from large-scale household surveys using sophisticated new techniques to small-sample facility surveys for recurrent cost calculations.

The HFS data sets can be categorized into demand data (22 sets) and supply data (16 sets). *Exhibit 1* shows the data collection methods utilized for both demand and supply information and indicates which of the five HFS technical themes (identified above) they served.

### Demand Data Collection

Twenty-two of the HFS data collection efforts have focused on demand—people’s potential or actual use of health services and factors affecting utilization. Six data collection methods were employed: household surveys, patient interviews, focus group sessions, employer interviews, insurer interviews, and facility utilization records.

#### Household Surveys

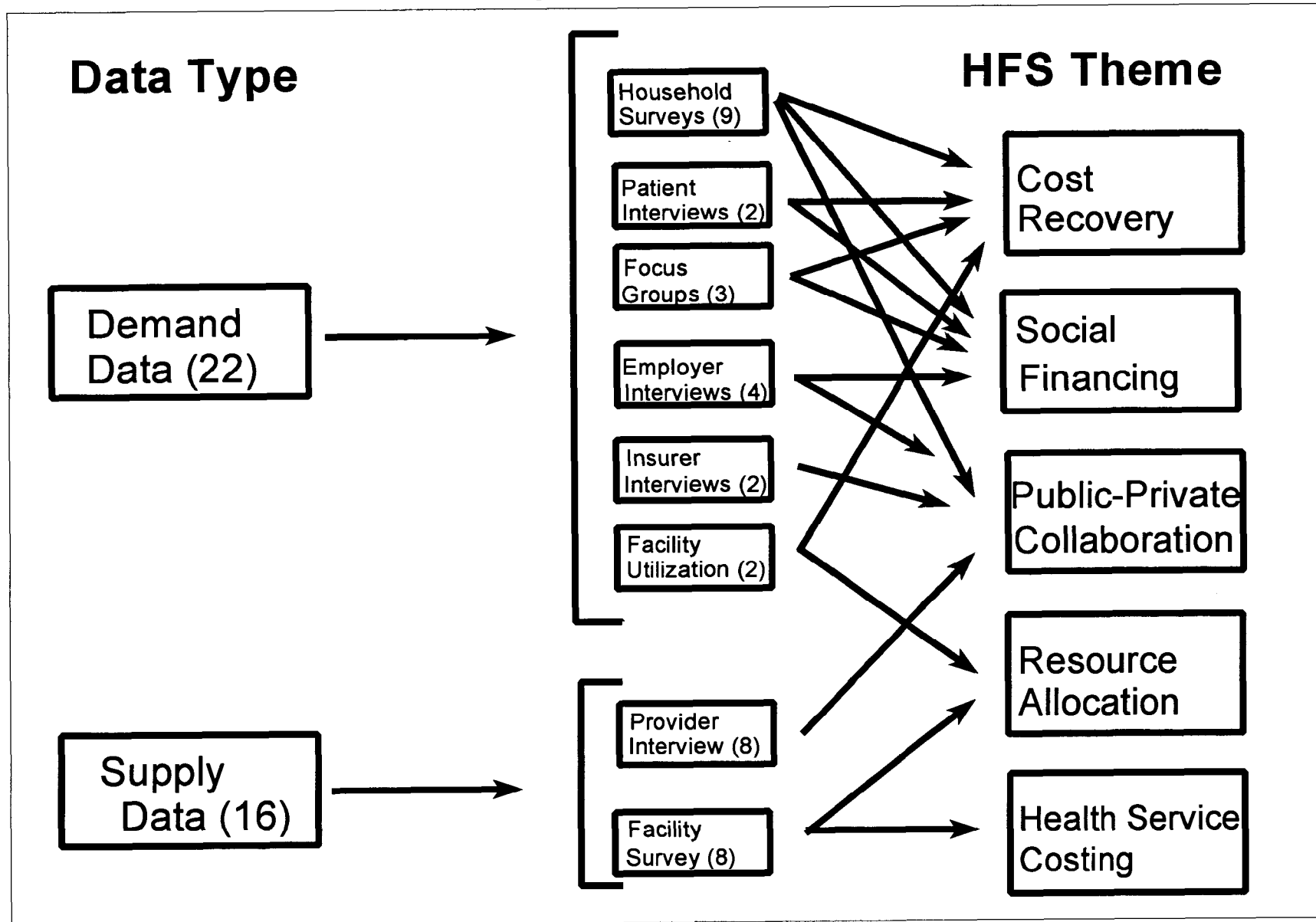
Household surveys are the most informative but also the most expensive method of data collection, and these were the most frequently used methodology. HFS conducted nine household surveys, ranging in sample size from 100 households (in Haiti) to more than 14,000 individuals (in Niger).

In order to capture the impact of policies—especially health financing policies—on different socioeconomic groups, all of the HFS household surveys collected data on socioeconomic variables, including measures of wealth and income, as well as on some aspect of demand for health care. The surveys often utilized a variety of questions about income, expenditures, and proxy variables such as type of residence or physical possessions in order to overcome the well known difficulties in obtaining accurate measures of those socioeconomic variables. In addition to economic variables, the surveys covered other important variables such as education, gender, family size, age, marital status, and the relationship to the head of the household.

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<sup>1</sup>In addition, HFS undertook numerous other small data collection activities, such as single facility cost studies, that are not included in this number and are not described in this report.

**Exhibit 1. The HFS Project: Data Collection: Type, Method, Theme**



The information on demand for health care usually included retrospective information about the respondents' recent use of health care facilities. The period for which respondents were asked to provide information (the "recall period") generally varied inversely with the size of the sample and the amount of detail contained in the questions. The shortest recall period used in an HFS survey was two weeks—a period short enough so that respondents could be expected to provide a considerable amount of quite detailed information with a high degree of reliability. This information included symptoms, severity and duration of symptoms, choices of health care providers (types of providers and the order of consultations), payments (monetary and in-kind), type and amount of transportation costs, time of transportation and whether anyone else accompanied the respondents, waiting time, and satisfaction with services.

All HFS surveys of household health care-seeking behavior included questions about the use of curative care. Respondents were asked, first, whether they were sick or injured in the recall period and, if so, what if any care they obtained. Several surveys also gathered information about preventive services. In Niger, two household questionnaires included questions about past enrollment in prenatal care programs or immunization of children.

In addition to asking about past health care-seeking behavior, demand surveys sought information about respondents' future willingness to pay for health services and improvements in the quality of health care delivery. In Benin, Central African Republic, and Burkina Faso, HFS used the relatively new "contingent valuation" approach to ascertain willingness and ability to pay for hypothetical quality improvements (e.g., increased drug availability or cleaner facilities).

A similar methodology was employed in the second HFS household survey in Niger, which was conducted six months after the introduction of qualitative improvements and user fees. The survey asked respondents about their willingness and ability to pay and to pay more than they were then paying under the pilot scheme. The survey also sought information about respondents' satisfaction with the improved system and their choice of payment method (including the reasons behind their preferences).

## **Patient Interviews**

Patient interviews provide information similar to that of household surveys and were sometimes used to reduce the cost of and time required for data collection. However, the HFS experience confirmed that patient interviews also more limitations than household surveys. In particular, they capture only the segments of the population that are sick and that choose to utilize particular providers for treatment. They exclude people who do not seek care or who use nonsurveyed health facilities. Therefore, there is no control over the type of respondents interviewed and no assurance that the sample is representative of the whole population with respect to income, residence, age, religion, and other important socioeconomic variables. The HFS Project used patient surveys in the Congo, India, Niger, and Egypt.

## **Focus Group Sessions**

Focus group sessions were used to study the demand for health care in three instances.<sup>2</sup> In this approach, a moderator brings together a group of individuals to discuss a series of questions about which they have information or views of interest to policymakers. The main difference between this approach and the previous two is that the information collected is usually more qualitative than quantitative. Results are often textual and include, for example, indications of agreement or disagreement about issues, relationships, and behavior patterns, among others. The strength of this approach is that issues can be discussed in-depth and respondents can provide ideas and information that might be missed with more traditional methods. Having a skilled moderator introduce the issues and facilitate the discussion is an important determinant of the success of this approach. The HFS Project used focus groups with good results for studying the economic impact of AIDS in Nigeria and Kenya and to study issues of quality of care and willingness to pay for quality improvements in Fiji.

## **Employer Interviews**

In countries where large employers run health facilities for their employees or contract with independent or public health providers for the care of their employees, employer interviews can provide information on an important source of demand for health care. Employers figure in both the delivery and the financing of care in most countries. Employer interviews usually focus on the type and level of health care available to employees, the employers' relationship to the government and the health sector, and the potential role for health insurance. The HFS Project conducted employer interviews to support its work in Haiti, Kenya, Pakistan, and Papua New Guinea.

## **Insurer Interviews**

Health insurance is an important element of health care in a number of middle-income developing nations, and it is slowly emerging in lower-income nations. Health insurance takes different forms in different countries and is an important source of financing for health care. Insurer interviews usually focus on issues such as population coverage, services covered, the strengths and weaknesses of the insurance industry, and the insurers' relationships with the government, employers, and health care providers. The HFS Project interviewed insurers primarily in Kenya and Papua New Guinea.

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<sup>2</sup>Focus group sessions can also be used to gather information about supply conditions in the health sector. This method was classified under demand for this paper because under the HFS Project it was not used to study supply conditions.

## **Facility Utilization Records**

A study of facility utilization records is perhaps the simplest and least costly of the data collection approaches the HFS Project employed, since it relies on existing records that are usually centrally stored and relatively easy to access. However, ease of collection does not translate into ease of use. Researchers have little control over the size, accuracy, content, or quality of the information contained in these records. HFS experience suggests that the quality of existing facility records in low-income developing countries is usually poor. This poor quality limited the amount and type of analysis the data could support. The HFS Project used this type of data source primarily in Uruguay and Egypt.

## **Supply Data Collection**

The HFS Project collected 15 data sets on supply conditions in the health sector. Supply conditions refer to the production and delivery of health care. Eight data collection efforts can be characterized as provider interviews and eight as facility surveys.

### **Provider Interviews**

Provider interviews refer to structured interviews with a number of health care providers. In this context, providers are owners of facilities, managers of facilities, or medical and health personnel who provide services in the facilities. The type of information collected can be both qualitative and quantitative. Examples of issues covered in HFS provider interviews include:

- ▲ motivational issues, such as the reasons facilities opened in the private sector or the reasons behind the choice of site;
- ▲ the relationship with the Ministry of Health and other governmental agencies, which can include the effect of regulations, taxation, and direct controls;
- ▲ quality of care issues;
- ▲ provider views about factors affecting the demand for health care and the characteristics of the patients; and
- ▲ resource allocation and efficiency of production issues.

HFS carried out provider interviews in Egypt, Haiti, India, Kenya, Papua New Guinea, Senegal, and Tanzania.

## **Facility Surveys**

Facility surveys are quantitative data collection efforts centered around health care delivery facilities. Facility surveys have been used by the HFS Project in public and private health care facilities to probe issues relating to:

- ▲ resource allocation and use
- ▲ revenue generation from cost-recovery efforts
- ▲ costing of recurrent and capital expenditures
- ▲ utilization records
- ▲ quality of care.

HFS used facility surveys to obtain data in Algeria, Burkina Faso, Congo, Ecuador, Egypt, Kenya, India, Niger, and Senegal.

## **RATIONALE FOR COLLECTING THE DATA**

The HFS Project mandate calls for activities under four headings: technical assistance; applied research; training; and dissemination. Data collection has played a direct and important role in the first three of these activities.

An important objective of HFS technical assistance activities has been to provide host country decisionmakers with timely information in such areas as costing and utilization in private and public health facilities and household demand and willingness and ability to pay. Decisionmakers have utilized this information to assess health financing reforms they are considering and to assess the sustainability of planned or existing public health services. The information and data gathered by the HFS Project has helped to define the problems and provide some of the answers. In addition, in some cases it also has helped to convince stakeholders that change is needed and has given policymakers tools for building consensus. HFS data collected in Niger, for example, was critical to evaluating pilot tests of alternative cost recovery/quality improvement schemes and to generating a consensus about desired national policy.

Applied research activities under the HFS Project fall into two categories: major applied research (MAR) and smaller applied research (SAR). MAR activities comprised three phases: 1) literature review and a research design for field work, 2) field work, and 3) analysis. Phase One papers have been completed in nine areas:

- ▲ Provider incentives and productive efficiency in government health services
- ▲ Technical and economic efficiency in the production of health services \*
- ▲ Extending coverage and benefits of social financing systems in developing countries \*
- ▲ Efficiency in the consumption of health services: concepts and research needs
- ▲ Public and private interactions in the health sector in developing countries \*
- ▲ Economic impact of malaria \*
- ▲ Means testing in cost recovery of health services in developing countries
- ▲ Quality of health care and its role in cost recovery with a focus on empirical findings about willingness to pay for quality improvements \*
- ▲ Factors affecting the development of private health care provision in developing countries \*

HFS has completed Phase Two field work and Phase Three analysis on the six topics above that are marked with an asterisk. Data have been collected and analyzed for major applied research studies in Kenya, Niger, Nigeria, Senegal, and Tanzania.

Data were also collected for many of the HFS small applied research studies. Data were collected in Algeria, Belize, Cameroon, Central African Republic, Congo, Fiji, India, Kenya, Egypt and Uruguay, for the following studies:

- ▲ "Expenditure Patterns and Willingness to Pay for Health Services in Belize: Analysis of the 1991 Belize Family Life Survey"
- ▲ "Schistosomiasis Control Strategies in Northern Cameroon: A Study Based on Household Survey Data from the Extreme North Provinces"
- ▲ "Cost Recovery and Quality of Care in the Congo"
- ▲ "Quality of Health Care in Relation to Cost Recovery in Fiji: Focus Group Study"
- ▲ "Multiple Job Holdings by Government Health Personnel in Developing Countries(India)"
- ▲ "Analysis of the Demand for Inpatient and Outpatient Care from Embaba Hospital, Cairo, Egypt"
- ▲ "The Effects of Population Aging on Health Care Utilization and Costs for the Centro de Asistencia del Sindicato Médico de Uruguay (CASMU)"
- ▲ "Study of Availability and Price of Drugs in Algeria"

Since most HFS data collection activities have included developing country counterparts, these activities led to a considerable amount of training and institutional capacity-building. Policymakers were involved in the design of data collection activities; local enumerators and supervisors were trained to collect the data; computer programmers and data inputters were trained to handle data inputting and cleaning; and planners and government and academic researchers were involved in the analysis. Participating in large data collection activities such as household or facility surveys, left host countries with an enhanced capacity to undertake similar activities in the future.

*Exhibit 2* summarizes the role of data collection in meeting HFS work objectives and notes the countries where these activities occurred.

**EXHIBIT 2**  
**THE ROLE OF DATA COLLECTION IN HFS ACTIVITIES**

<b>HFS Activity</b>	<b>Role of Data Collection</b>	<b>Countries</b>
Technical Assistance	▲ Help define the problem	Belize, Burkina Faso, CAR, Ecuador, Egypt, Haiti, Niger, Nigeria, Pakistan, PNG, Peru, Senegal
	▲ Data for decision making	
	▲ Tool for consensus building	
	▲ Evaluation of policy effectiveness	
Applied Research	▲ MAR: data collection is the second of the three-phase approach: 1.literature and experience review 2. field work 3. analysis and dissemination	Algeria, Cameroon, CAR, Congo, Fiji, India, Kenya, Niger, Senegal, Tanzania, Uruguay
	▲ SAR: 8 activities included data collection	
Training	▲ Training enumerators	Activities varied by country
	▲ Training of trainers	
	▲ Training computer programmers	
	▲ Training data inputters	
	▲ Training researchers and planners	

## HOW THE DATA WERE USED: SOME EXAMPLES

The previous sections discussed how data were obtained and the rationale for data collection in the HFS Project. This section provides examples of how these data were utilized in HFS work in Niger, Senegal, Papua New Guinea, Ecuador, Kenya, and Nigeria.

*Exhibit 3*, organized by country, summarizes all the data collection activities by the HFS Project by country. For each data collection activity, the exhibit shows the type of the data collected, the size of the sample, the language of the data collection instrument, the rationale for the data collection, the year the data were collected, and any local group or organization that may have collected the data for HFS. (The *Appendix* provides a brief description of how each HFS data set was used, in addition to information on why the data were collected, the data collection instrument, the content, and the corresponding HFS report.)

### Niger

With assistance from HFS and other donor projects, the Government of Niger implemented pilots to compare two different cost recovery methods: an annual health tax plus a small co-payment scheme and a fee-for-service scheme. Each system was implemented in one district. Identical quality of care improvements were also implemented in each district. The pilot tests were designed to aid Nigerien policymakers in making decisions about the type of cost recovery system to implement nationally. Policymakers were particularly interested in assessing the effect of the two schemes on four issues:

- ▲ revenue generation
- ▲ quality of care
- ▲ equity of access
- ▲ management costs and burdens.

Household and facility data were collected from the two districts implementing the pilot tests and from a control district. The facility data provided information on revenue generation, objective measures of quality of care, perceptions about quality of care, utilization trends, and management issues.

Exhibit 3: HFS Data Sets, by Country

<b>Data Set</b>	<b>Type</b>	<b>Size</b>	<b>Instrument</b>	<b>Support</b>	<b>Date</b>	<b>Group</b>
<b>Algeria Pharmacy Survey</b>	Supply	n=20	French	SAR	1993	(L)
<b>Belize Household Survey</b>	Demand	n=2656	English	TA,SAR	1991	HFS + (L)
<b>Burkina Faso Household</b>	Demand	n=900	French	TA	1994	(L)
<b>Burkina Faso Facility</b>	Supply	n=12	French	TA	1994	HFS
<b>Cameroon Household Surv.</b>	Demand	.	French	SAR	1993	(L)
<b>CAR Household Survey</b>	Demand	n=1,263	(Eng. Fre. +)	SAR	1991	HFS + (L)
<b>Congo Patient Survey</b>	Demand	n=399	French	SAR	1992	HFS
<b>Ecuador Facility Cost Surv.</b>	Supply	n=6	D. N. A.	TA	1993	HFS
<b>Egypt Household Survey</b>	Demand	n=1,652	(Eng. Ara. +)	TA	1992	IDC (L)
<b>Egypt Utilization Survey</b>	Demand	n=601	English	TA	1992	IDC (L)
<b>Egypt Facility/Provider Surv.</b>	Supply	n=20	English	TA	1992	IDC (L)
<b>Fiji Focus Group Study</b>	Demand	n=9, i=20	English	SAR	1992	HFS
<b>Haiti Household Survey</b>	Demand	n=100	French	TA	1991	HFS
<b>Haiti Doctors Survey</b>	Supply	n=21	French	TA	1991	HFS
<b>Haiti Employer Survey</b>	Demand	n=25	French	TA	1991	HFS
<b>India Patient Survey</b>	Demand	n=1582	English	SAR	1993	(L)
<b>India Doctor Survey</b>	Supply	n=194	English	SAR	1993	(L)
<b>India Facility Survey</b>	Supply	n=20	English	SAR	1993	(L)

n = number of units, f=number of groups, TA= Technical Assistance, SAR= Small Applied Research, MAR= Major Applied Research,  
L=Local Group, N.A.= Not Available, D.N.A.= Does Not Apply.

Exhibit 3: HFS Data Sets, by Country

Data Set	Type	Size	Instrument	Support	Date	Group
Kenya Employer Survey	Demand	n= 111	English	SAR	1993	HEDRA (L)
Kenya Facility Survey	Supply	n= 66	English	TA	1990	(L)
Kenya Insurance Survey	Demand	n= 23	English	SAR	1993	HEDRA (L)
Kenya Provider Survey	Supply	n= 19	English	SAR	1993	HEDRA (L)
Kenya Focus Group	Demand	f= 11	Eng. + Local	MAR	1993	HFS + (L)
Niger Household Survey I	Demand	n= 14,000	French	MAR	1993	(L)
Niger Household Survey II	Demand	n= 13,000	Eng. Fre.	MAR	1992	(L)
Niger Quality of Care Survey	Supply	n= 200	French	MAR	1994	(L)
Niger Facility Survey	Supply	n= 20	French	MAR	1993	HFS
Nigeria Focus Group	Demand	f= 27	Eng. + Local	MAR	1993	HFS + (L)
Pakistan Employer Survey	Demand	n= 38	English	TA	1992	HFS
PNG Employer Survey	Demand	n= 20	English	TA	1993	HFS
PNG Provider Survey	Supply	n= 6	English	TA	1993	HFS
PNG Insurance Survey	Demand	n= 7	English	TA	1993	HFS
Peru Household Survey	Demand	n= 300	Spanish	TA	1991	Cuanto (L)
Senegal Public Fac. Surv.	Supply	n= 83	French	MAR	1993	HFS
Senegal Private Fac. Surv.	Supply	n= 60	French	MAR	1994	SENECI(L)
Senegal Provider Survey	Supply	n= 60	French	MAR	1994	HFS
Tanzania Provider Survey	Supply	n= 63	English	MAR	1994	HFS

n = number of units, f=number of groups, TA= Technical Assistance, SAR= Small Applied Research, MAR= Major Applied Research,  
L= Local Group, N.A.= Not Available, D.N.A.= Does Not Apply.

The first household survey was conducted six months prior to the pilot test, and the second household survey was conducted six months into the pilot test. Conducting one household survey before the interventions and another household survey after the changes were introduced allowed researchers and policymakers to measure and compare the effect of each cost recovery method on:

- ▲ demand for health services at public facilities, including for particularly vulnerable groups
- ▲ health-seeking behavior in general and by socioeconomic groups
- ▲ willingness and ability to pay
- ▲ total household expenditures for health care
- ▲ important equity and accessibility implications.

## **Senegal**

In 1991, as part of a comprehensive policy reform initiative, the Government of Senegal signaled the need for a study of efficiency in public health care facilities. The HFS Project undertook the study in 1992-93, and later (in 1993-94) it replicated the study using a sample of nongovernmental health care facilities. To measure provider efficiency, the study gathered facility data about costs and quality of care and then derived measures of efficiency. The public sector study sought to identify levels and determinants of efficiency in the public sector. It recommended to the government several policy measures aimed at improving productive efficiency in the public sector. The private sector study sought to compare efficiency levels between public and nongovernmental providers. Recommendations to the government included the pursuit of public collaboration with those private sector providers that exhibited greater efficiency than public sector facilities.

## **Papua New Guinea**

The National Department of Health of Papua New Guinea was considering the use of private health insurance to lighten the financial burden on the public sector for providing health services. This initiative was intended to stimulate the use of private health insurance, using managed care principles. HFS conducted surveys of employers, insurance companies, and providers (hospitals and clinics) to gain insight into the demand potential for private health insurance in Papua New Guinea's largest urban and industrial center.

## **Ecuador**

In 1991, Ecuador's Ministry of Health identified chronic under-financing as its principal problem in providing health care services in the public hospitals. It knew that additional budgetary financing would not be forthcoming. As a result, the HFS Project directed a cost survey of six of the largest Ecuadorean health facilities. The purpose was to collect comparative information on costs and revenue-generation in Ministry of Health, Social Security System, and other nonprofit hospitals. These data facilitated an assessment of the potential for increasing the user fees and for other changes in Ministry of Health facilities.

## **Kenya and Nigeria**

HFS used focus groups in an innovative way to study the economic impact of malaria in Kenya and Nigeria. USAID was interested in a rapid assessment methodology, and so HFS designed a focus group discussion agenda and sample selection that countries could readily replicate at lower costs than for a large-scale national health survey. Using local interviewers, HFS conducted 11 focus group interviews in Kenya and 27 in Nigeria in a total of three weeks in each country. The focus group sample comprised men and women workers and managers in the agricultural, service, and industrial sectors, including small farm agriculture, agribusiness, schools, factories, and small commercial and service occupations.

The focus group discussions in Kenya and Nigeria provided both qualitative and quantitative information about people's perceptions of malaria, their usual sources and costs for services and medication to treat malaria, and malaria prevention activities. Findings from these discussions were used to estimate the effect of malaria on work and productivity, both for adult episodes and for child episodes for which workers take time off to care for the child. HFS combined these estimates of the impact on worker productivity with wage and other economic data to assess malaria's economic impact at the national and sectoral level; for urban and rural populations; and for men, women, and households.

## POTENTIAL USES OF THE DATA

The data collection efforts described above represent a considerable investment of project effort and resources. As explained above, each element of this work supported a specific technical assistance or applied research objective.

HFS staff believe that some of the data sets can be utilized to explore issues and questions that were not included in the HFS research designs and that HFS lacked the time or resources to consider. Although the smaller quantitative and the qualitative data sets have limited potential for additional use, the larger quantitative data sets can be used beyond their original intended purposes. To the extent permitted by USAID and the governments concerned, HFS will seek to make these data available for use by responsible academic and non-academic institutions in developing and more developed countries.

A considerable effort has been put into developing state-of-the-art data collection instruments, and these instruments are also an asset that others may find useful. HFS data collection instruments are available in the language in which they were administered and, generally, in English, as well.

The HFS Publications List and companion Bibliography of Abstracts provide information on the research papers and technical reports cited in each survey description. Inquiries about the availability of specific data sets, codebooks and questionnaires should be addressed to:

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## **APPENDIX**

### **SUMMARY PROFILES ON 38 DATA COLLECTION EFFORTS UNDER THE HEALTH FINANCING AND SUSTAINABILITY (HFS) PROJECT**

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## **ALGERIA PHARMACY SURVEY**

**Why Created?:** The Algeria Pharmacy Survey was used as part of an HFS Small Applied Research (SAR) effort. The survey was created to analyze the effects of current changes in the pharmaceutical industry with regards to prices and availability of drugs.

**Instrument:** Between June 15 and August 16, 1993, questionnaires (in French) were distributed to ten hospitals and thirty offices in the localities of Algiers, Oran, and Tizi-Ouzou. Replacement facilities were found for sites where the information could not be gathered. Six hospitals and 32 dispensaries responded to the survey.

**Content:** With respect to prices, the questionnaire sought to find out whether sharp price increases were due only to the current devaluation of the currency, or from some other factors. It also sought to find the impact of price increases on the social insurance system; and whether there are any measures to regulate the market. With respect to availability, the questionnaire sought to determine the level to which drug shortages have become structural, to know whether availability is a problem of supply or of organization; and to understand the availability at dispensaries and at hospitals.

**Use:** The results of the survey are described in the Smaller Applied Research paper:

- ▲ "Study of the Price and Availability of Drugs in Algeria" (August 1993).

## **BELIZE HOUSEHOLD SURVEY**

**Why Created?:** The Belize Household Survey was initially part of an HFS Technical Assistance effort which became an HFS Small Applied Research effort, conducted in 1991. The survey was created to analyze simple utilization of health care and cost frequencies, and to observe the effects which several socioeconomic variables may have on utilization, current expenditures, and willingness to pay upon price changes, subsidy targeting, and quality improvements.

**Instrument:** The survey employed a questionnaire (in English) consisting of 919 total questions, not all of which are necessarily asked of the respondent. The sample consisted of 2656 mothers, 15-44 years of age. A code book is available which documents the number of responses to each question along with other descriptive statistics.

**Content:** The respondent is asked questions about her home, herself, fertility, family planning, sterilization, AIDS, and sexual relationships. She is asked questions about health care utilization during both pregnancy and the time of birth. Questions such as type of facility used, cost of visit, amount spent on medicines, the number of times she visited the facility, the location of the delivery, who delivered the baby, type of delivery, and delivery costs are asked. Costs consist of expenditures on treatment, laboratory work, medicine, and transportation to the health care facility. The type of facility is divided into governmental, formal private, and informal private (such as pharmacies and traditional healers). The willingness to pay questions are posed such that the respondent answers either "yes" or "no" to proposed quality improvements at various costs to the respondent. These quality improvements consist of reductions in waiting time, improvements in the attractiveness of facilities, and availability of medicines.

**Use:** The results facilitate analysis of:

1. prenatal and birth utilization of providers, and costs
2. recent utilization and costs to care for sick family members
3. utilization of family planning facilities
4. willingness to pay for government provided health care.

These four parts are then, in turn, analyzed across the various socioeconomic variables. Examples of such cross-analyses are location and the number of visits, location and total costs, wealth and total costs, education level and costs, education level and drug costs, education level and utilization rates, education level and use of the family planning facility, among others. The results of the survey are found in the Smaller Applied Research paper:

- ▲ "Expenditure Patterns and Willingness to Pay for Health Services in Belize" (February 1993).

## **BURKINA FASO HOUSEHOLD SURVEY**

**Why Created?:** The Burkina Faso Household Survey was part of an HFS Technical Assistance effort, conducted in 1994. The survey was created to gather information on demand for health care at public facilities in the provinces of Bazéga, Gourma and Séno. The collected information was used in a health financing model to help government policymakers identify user-fee options for ambulatory health facilities in Burkina Faso.

**Instrument:** A questionnaire was developed by the Government of Burkina Faso with the help of HFS staff (available in French and English).

**Content:** The survey employed one questionnaire in three parts. The first section asks general questions about the household, its economic activity, and its willingness to pay for health care. It asks whether anyone in the household has been sick in the last two weeks; whether anyone has been pregnant in the last 12 months; whether the household practices agriculture and how much money it makes from agriculture; source and amount of income and expenses over the last 12 months; the amount the household would be willing to spend for hospital equipment, beds, and maintenance; if a household member were sick with: 1. respiratory infection, 2. malaria, 3. intestinal infection, the amount the household would be willing to spend on pharmaceutical products; and the amount the household would be willing to pay for: 1. contraceptives, and 2. condoms.

The curative care questions ask about experiencing symptoms for any illness, whether care was sought, the type of care (where?, who?, why?), the severity of the illness and days in bed, the availability of medicines, the distance to the location of treatment, the waiting time at the facility, amount of money spent on the treatment, and a preference ranking for the different local facilities.

The preventive care questions ask whether someone in the household was recently pregnant, where birth was given, and how much was spent. It also asks if the respondent household is registered with prenatal care, where, why, how much is spent, and whether or not it was paid with a health card.

**Use:** The information was used to produce the following Technical Notes:

▲ "Survey on Willingness and Ability of Households to Pay for Healthcare in Three Provinces of Burkina Faso (August 1994)

▲ "A Supply-Demand Model of Health Financing: An Application to the Ambulatory Health System of Burkina Faso" (August 1994)

## BURKINA FASO FACILITY SURVEY

**Why Created?:** The Burkina Faso Facility Survey was part of an HFS Technical Assistance effort, conducted during a three-week field assignment in February and March 1994. The survey was created to gather information on costs, revenues and staffing at primary health care facilities in the provinces of Bazéga, Gourma and Séno in order collect information for a pricing structures methodology intended to help government policymakers identify user-fee options for ambulatory health facilities in Burkino Faso.

**Instrument:** The survey employed a questionnaire (available in French and English) which was given to 12 facilities.

**Content:** The questionnaire seeks information on current operating expenses, utilization levels, and revenues from the facilities. The facility is asked about its ownership (public or private), its 100 most-sold products (amount, price, date of most recent reception of supplies, whether the product has been out of stock over the last three months), its rate of filling prescriptions, whether a drug's availability is a function of the prescription, the reasons for any problems with drug availability, whether medicines are more readily available at private or public facilities, whether or not the facility is an importer or wholesaler of pharmaceuticals, its thoughts toward public delivery of pharmaceuticals and its payment practices, and its thoughts toward the intervention of the private sector in delivering pharmaceuticals.

**Use:** The data was used to write the Technical Note:

▲ "A Survey of Costs, Revenues, and Staffing at PHC Health Facilities in Three Provinces of Burkina Faso" (August 1994).

The data should be useful for policymakers in future efforts to enhance the efficiency and quality of care available at health centers and to increase financial sustainability. Indeed, the responses revealed that public health centers in Burkina Faso suffer from a variety of weaknesses that pose significant obstacles to their effective functioning. Shortages of health personnel, essential drugs, and equipment, and irregular supervision of activities have the effect of reducing the already low demand for care at public health centers.

## CAMEROON HOUSEHOLD SURVEY

**Why Created?:** The Cameroon Household Survey was created as part of an HFS Small Applied Research effort. The research focused on the cost-effectiveness of alternative strategies to control schistosomiasis in a rural community in sub-Saharan Africa. Schistosomiasis is an endemic disease of the world with vaccination not yet available. The study also attempted to approximate the impact of agricultural programs on the prevalence and geographic extent of the infection. Large scale irrigation projects can expand the geographic area of infection by increasing the population of snails, which carry the disease. As a result, households' willingness and ability to pay was measured for four alternative strategies for reducing the rate of schistosomiasis prevalence:

1. mollusciciding (killing the snails)
2. health education
3. arranging alternative sources of water supply
4. diagnosing and treating the infected individuals.

**Instrument:** For this study, 216 households in five villages were surveyed during June-July 1993. All five villages are basically agricultural, and the average number of household members is 5.67. The survey employed two extensive questionnaires (in French). The first questionnaire consists of several categories of questions: general, sociodemographic, decisionmaking, the most recent illness in the compound, schistosomiasis (bilharsia), the water source for the compound, medical interventions, health education, the problems snails cause in ponds, and provision of the drinking water. The second questionnaire is a separate "village" questionnaire and a more specific schistosomiasis cost-analysis survey.

**Content:** In the first questionnaire, the general questions ask about the compound and whether it participates in cost-sharing for health. The sociodemographic questions ask about the wealth of the compound, the produce yielded by the compound, the education level of the respondent, and the frequency with which the respondent watches television or listens to the radio. The questions on decision-making ask about the incidence of sickness in the compound in the last 15 days, how much money was spent on medicine in the last 15 days, and expense on and means of transportation to a traditional healer. Both the questions on the most recent illness in the compound and the questions on medical intervention ask about the specific individual(s) who were sick and where and why that person sought treatment, as well as about the use of mosquito coils. Both the questions on schistosomiasis (bilharsia) and the questions on health education petition the respondent's knowledge of schistosomiasis—as to what schisto is, its contagiousness, its symptoms, its severity to health—and the respondent's direct or indirect experience with schistosomiasis. Questions regarding the water source of the compound ask about the distance to the water source, the water sources used at the end of the rainy season, specifically for cooking, for washing, and for swimming. The questions dealing with the problems caused by snails asked whether snails in ponds are involved in the transmission of schisto, whether the respondent would swim/drink water from ponds treated with chemicals to combat the snail problem, and whether the respondent would be willing to pay to ensure that a snail combating program is undertaken. The questions on the provision of the drinking water ask general questions about the respondent's water source and how much the respondent would be willing to contribute toward a hand pump.

The village questionnaire asks questions on the water supply for the village, on agriculture and the village economy, on health care, on village festivals, on the village health clinic and its treatment of schistosomiasis, and on the village pharmacy. The agricultural and economic questions ask for the harvest volumes (in hectares) for millet, cotton, and onions, and for the costs of agricultural production inputs. The questions on health care ask about the availability of health personnel in the area. The village festivals questions ask about the money received and spent for the festival, and about how this money was raised. The questions regarding the village clinic ask general questions about the clinic (i.e. ownership, personnel, number of beds), as well as about the incidence of treatment for schistosomiasis. The questions on the village pharmacy ask about its location, its ownership, and drugs which it sells, as well as about whether the pharmacy sells medicines to treat schistosomiasis, how much of this medicine was obtained in the last year, the source of this medicine, and how much the pharmacy paid for it.

**Use:** It is hoped that the estimated costs resulting from this study can be adapted for use by other less developed countries. Detailed cost estimates would permit health professionals to answer the following questions:

1. Are user charges feasible for diagnosis and treatment?
2. If diagnostic services are provided free of charge, what fee should be set for treatment to recover total costs?
3. Will consumers be willing and able to pay for the services? And,
4. What would be the implications of integrating these services into the primary health care program of a given country?

Results of the survey can be found in:

- ▲ "Schistosomiasis Control Strategies in Northern Cameroon" (January 1994).

## CENTRAL AFRICAN REPUBLIC HOUSEHOLD SURVEY

**Why Created?:** The Central African Republic (CAR) Household Survey was part of an HFS Small Applied Research effort. This survey was created to estimate the effects of a user fee system on demand for health care, especially in regards to quality. The survey looks for the combination of prices and quality improvements which will increase the utilization of public health facilities, given that higher prices negatively affect demand and higher quality positively affects demand. The Ministry of Public Health and Social Affairs (MPHSA) wanted to know whether a national user fee program could take on a uniform nature or if the program should vary between urban and rural areas or across health regions.

**Instrument:** The survey employed a questionnaire (available in French and in English) consisting of 120 questions, many of which contain multiple choice answers which reflect the intensity of valuation, or willingness to pay. The questionnaire has five versions, each with a different set of prices. The sample consisted of 1263 nationally representative households over 79 census tracts. The accuracy of the survey data was enhanced by selecting disproportionately more census tracts in urban areas relative to rural areas, since urban areas have higher health care expenditures which require larger samples.

**Content:** The questionnaire consists of two principal parts, general sociological questions and the willingness to pay questions. For the general sociological questions, the subjects are households. The questions seek information such as a description of the household, as to size and who is the leader, income contributions to the family by respective members, whether or not the family owns means for transportation, the education level, and household expenditure. For the contingent valuation questions, only individuals within the household who were sick in the previous month are sampled. The individual is asked about his or her current health status, the illness suffered, and the severity of the illness. The individual is also asked what facility was used, the distance to the facility, the amount of payment for transportation to the facility, or whether traditional healing methods were used. These same questions are broken down as to whether the provider was a private or a public facility. For the contingent valuation questions, the interviewer described a hypothetical quality improvement, and then asked the respondent if he/she would pay a specific price for it. The proposed quality improvements consist of:

1. facility maintenance
2. supervision of personnel

and pharmaceuticals to treat:

3. malaria
4. STD's
5. ARI
6. intestinal parasites
7. diarrheal diseases.

For the traditional economic method, data was collected on the quality of care at health facilities. The quality variable included presence of a physician on staff, cleanliness of the facility's building, cleanliness of the facility's yard, and availability of pharmaceuticals.

**Use:** The contingent valuation questions revealed whether or not the willingness to pay was more or less than the price quoted in the question. The relationship of health care expenditures to the quality of care was estimated in two steps:

1. estimates of the probability that a person who was ill had expenditure for modern care, and
2. estimates of expenditures using the subsample of patients with expenditures. Health care expenditures were then the product of these two steps.

Two data sets were constructed for two different types of observations from the national survey data:

1. households and 2. individuals in the households who had been ill during the month prior to the interview. Results of the survey are found in the Smaller Applied Research paper:

▲ "Estimating the Willingness to Pay for Health Care: A Comparison of Contingent Valuation and Traditional Economic Methods" (April 1993).

## CONGO PATIENT SURVEY

**Why Created?:** The Congo Patient Survey was part of an HFS Small Applied Research effort. The survey was designed to examine the relationship between cost recovery and the quality of curative health services in the Congo. The survey was also designed to compare pricing practices both between rural and urban and between public and private facilities. The survey attempts to assess the quality of care from patients' perspectives, and to analyze patient characteristics in conjunction with choice of facility.

**Instrument:** The survey employed a questionnaire (in French) and was conducted in November 1992. 399 outpatients were surveyed upon their exiting of eight health centers. These facilities were chosen to provide an even mix of urban and rural facilities, and an even mix of private and public facilities. The patients interviewed were chosen by means of a random selection process. The unit of analysis was the visit, as opposed to the patient or the episode of illness. A code book (in English) documents the type of answer (i.e. integer, yes/no) for each question.

**Content:** The questionnaire consists of five basic sections:

1. patient and household identification
2. socioeconomic information
3. curative care
4. patient satisfaction
5. payment.

The types of questions asked for the different sections were as follows. For patient and household identification: age, sex, marital status, religion, and size and composition of household. For socioeconomic information: occupation, education, income, and monthly household expenditure. For curative care: primary symptom and duration of illness, services and medicines received, reason for choice of facility, and mode and cost of transportation. For patient satisfaction: availability of services, medicines and supplies, competence of personnel, and physical conditions of the facility. For payment, the types of questions asked pertained to amount paid, reasons for non-payment, previous payments for same illness episode, and insurance.

**Use:** The results of the survey are found in the Smaller Applied Research paper:

- ▲ "Cost Recovery and Quality of Care in the Congo" (September 1993).

## ECUADOR FACILITY COST SURVEY

**Why Created?:** The Ecuador Facility Cost Survey was a part of a Technical Assistance effort conducted in 1991. The survey was a study of six of the largest public sector hospitals in Ecuador, consisting of four Ministry of Health (MSP) facilities and two acute-care hospital facilities of the Junta de Beneficiencia de Guayaquil (JBG), and the largest laboratory of The National Institute of Hygiene and Tropical Medicine (INHMT).

The survey was created to facilitate policy change and explore options to extend or strengthen user fee systems in Ministry of Health facilities. The Ministry of Health (the largest health provider in Ecuador) has identified chronic underfinancing as its principal problem; and it knows that additional budgetary financing will not be forthcoming, given the poor performance of the Ecuadorian economy.

**Content:** This study seeks to answer three main questions:

1. assess current cost recovery practices, including fee schedules, means testing, billing and collection, administrative costs, revenues, and expenditures
2. estimate potential revenues from user fees and percent recovery through a series of price simulations
3. recommend administrative changes and options needed to implement a successful cost recovery system in both the short and long term.

**Instrument:** The questionnaire seeks information on total and average costs, sources of income, government support of the facility, destinations of revenue, amount spent on infrastructure, expenditure on special programs (e.g. cholera, child nutrition, mother-infant care, water and sanitation, etc.), number of employees, number of doctors, number of nurses, number of hospital beds, number of acute beds and ambulatory care, number of discharges, percent occupancy, average length of stay, and number of emergency visits.

**Use:** The survey is used to decide whether a revenue sharing plan can be established whereby facilities retain a substantial share of earnings. It is also used to compare costs and percent recovery for each hospital in the sample. The data are arranged by service category (inpatient, diagnostic, and outpatient) and by selected services within each category. These comparisons are then made within subgroups of the hospitals, such as general and pediatric hospitals, maternity hospitals, and private wards.

A unit cost analysis is employed to estimate current and future levels of cost recovery. Using available accounting, production, and price data, the cost analysis estimates accounting or financial costs. It measures total and average costs for selected services based on real financial outlays or expenditures related to the production of those services. The study focuses solely on recurrent or operational costs, since information on expenditures on infrastructure and equipment is not forthcoming. The results of the survey are found in the Technical Report:

▲ "Cost Recovery in Public Sector Hospitals in Ecuador" (September 1993).

## EGYPT ALTERNATIVE FACILITY/PROVIDER SURVEY

**Why Created?:** The Egypt Alternative Facility/Provider Survey was part of an HFS Technical Assistance effort. This facility survey was created to better understand the services which competing hospitals provide, and to estimate to what extent referrals were occurring between other facilities and Embaba General Hospital. The survey was created to determine the characteristics of competing hospitals and doctors in the catchment area.

**Instrument:** The survey employed a questionnaire surveying directors of competing hospitals to Embaba Hospital, and doctors with private clinics in the catchment area (10 subdistricts on the west side of the Nile River, across from Cairo). The total number of alternative providers surveyed was twenty, split evenly between the hospitals and the doctors. The questionnaire for the doctors is a shorter version of the hospital questionnaire, focusing on referral practices, contractual arrangements with business or insurance companies, and patient volume. The study was conducted between September 15, 1991 and April 30, 1992 by a physician. The sampling method targeted the most commonly used providers in the catchment area.

**Content:** The questions seek information on the number of beds, doctors, and employees; the number of inpatients and outpatients served; and the number performed and price of a list of about 45 common procedures. The questions examine the services offered and the prices charged, referral practices, and contractual arrangements with insurance companies and employers. For individual physicians, the questions examine the potential for referrals to Embaba Hospital under improved conditions.

**Use:** Results from the facility survey are found in the Technical Note:

▲ "The Effects of Cost Recovery on Demand for Health Care at Cairo's Embaba Hospital" (February 1993).

## EGYPT HOUSEHOLD SURVEY

**Why Created?:** The Egypt Household Survey was part of an HFS Technical Assistance effort which ran from September 15, 1991 to April 30, 1992. The survey was designed to provide information for strengthening health care in Egypt by bringing an appropriate balance among quality of services, adequate revenue base, and ensuring the access of all citizens to health care. The survey attempts to understand how utilization at Embaba General Hospital would be affected by the upgrading of the facility (through infrastructure, equipment, and management improvements) and an increase in prices. The survey was also designed to determine the incidence of illness in the population and to gather information about people who seek treatment in the formal medical sector when they are ill and those who do not.

**Instrument:** The survey employed a questionnaire (both in English and in Arabic) consisting of 94 questions. The survey was conducted in the catchment area of Embaba General Hospital in metropolitan Cairo. The catchment area is defined to be 10 subdistricts (containing 957,000 people) surrounding the hospital. 1,652 households and 8,012 individuals took part in the survey. This questionnaire was an exact duplicate of the Egypt utilization (patient) questionnaire.

**Content:** The questionnaire seeks information on demographic, socioeconomic, and health characteristics of individuals and households, health experience and patterns of health care service utilization over the recent past, reasons for provider selection and degree of satisfaction with services at Embaba General Hospital. To characterize the population, the survey seeks information on age, head of household, size of household, persons per room, health status, employment, household expenditure, household assets and presence of health insurance.

**Use:** The survey was used to determine if inpatient and outpatient price increases will result in a significant reduction in utilization. It is used to simulate the extent to which education, income, and insurance affect inpatient and outpatient utilization of the hospital, as opposed to private facilities. The results of the survey are found in the following reports:

- ▲ "Analysis of Inpatient and Outpatient Health Care Demand in Egypt" (April 1993)
- ▲ "The Effects of Cost Recovery on Demand for Health Care at Cairo's Embaba Hospital" (February 1993).

## EGYPT UTILIZATION (PATIENT) SURVEY

**Why Created?:** The Egypt Utilization, or Patient, Survey was part of an HFS Technical Assistance effort which ran from September 15, 1991 to April 30, 1992. This utilization survey was intended as a complement to the household survey. It was created to collect general information on the individual, the household, illnesses over the past month, hospitalizations over the past year, and provider preferences.

**Instrument:** The survey employed a questionnaire (both in English and Arabic) consisting of 94 questions. The survey was conducted in the catchment area of Embaba General Hospital in metropolitan Cairo. The catchment area is defined to be 10 subdistricts (containing 957,000 people) surrounding the hospital. By way of a random sampling process, 601 individuals took part in the survey. A stratified sample was selected, based on estimated proportions of total patients using Embaba, resulting in 202 outpatients, 69 tonsillectomy, 130 delivery patients, and 200 other inpatients. This questionnaire is an exact duplicate of the Egypt household questionnaire. A code book for the questionnaire is not available.

**Content:** Regarding the household, the questions seek information on expenditure, assets, health insurance policy, district of residence, and labor migration. Regarding the individual, the questions ask for information on sex, age, education, employment, income, health insurance, and prevalence of disabilities. Regarding illnesses over the past month, the questions seek information on type and duration of illness, action taken, number of actions taken for each illness, name and type of provider sought, travel time to provider, reason for choosing provider, length of stay, cost of hospitalization, co-payment, and referral to other provider. The information sought is basically the same for hospitalization over the past year and provider preferences.

**Use:** The survey was used to:

1. make suggestions about utilization responses to improving the quality of care at Embaba through infrastructure, equipment, and management improvements
2. determine if inpatient and outpatient price increases will result in a significant reduction in utilization
3. determine the extent to which education, income, and insurance affect inpatient and outpatient utilization of the hospital, as opposed to private facilities;
4. to measure how utilization at Embaba General Hospital would be affected by the upgrading of the facility (through infrastructure, equipment, and management improvements) and an increase in prices.

The results of the survey are found in the report:

- ▲ "Economic Surveys for Health Financing and Sustainability" (May 1992).

## **FIJI FOCUS GROUP STUDY**

**Why Created?:** The Fiji Focus Group Study was part of an HFS Small Applied Research effort. In the broad sense, this study was created to shape the role of and the potential for cost recovery in government facilities and services. It was created to carry out a study of consumer's perceptions of quality of care, in order to set priorities for the quality improvements in health care services.

**Instrument:** The survey, conducted in March 1993, employed nine focus groups with a sum total of 59 participants. Focus groups are informal discussions led by a moderator working from a prepared discussion guide (available in English). Unlike the sample survey, this approach yields qualitative information that is inappropriate for statistical analysis or generalization—the samples are small, and participants are purposely selected according to categories pertinent to the concerns of the study rather than to be representative of the total population. The focus group approach attempts to create a synergy to foster far deeper probing of issues than would be possible in a formalized individual interview, much less a questionnaire. This approach is generally more efficient in determining perspectives, attitudes, and behaviors. As the conclusions depend entirely on the analyst's judgment and interpretation, the use of multiple analysts is recommended to control bias.

**Content:** The discussion guide questions seek information on the following topics:

1. How do consumers view quality in choosing source and amount of care purchased: modern public facilities vs. modern private vs. traditional private vs. self-treatment?
2. What indicators do consumers use to evaluate the quality of health care?
3. What relative importance do they attach to the various indicators?
4. Under what conditions do consumers bypass nearer clinics to go directly to the hospital?
5. What improvements in quality would consumers like to see?
6. Would consumers increase their utilization of the government hospital and clinics if quality improvements were made?
7. Would consumers be willing to pay extra to fund these improvements?
8. How much more would they be willing to pay?

Regarding the type of quality improvements, the study mentioned upgrading of technical skills of providers, art of care (dedication, politeness, etc.), physical environment, improvement in the availability of drugs, accessibility of both generalists and specialists, and quality of inpatients' food.

**Use:** This study was broken down into nine focus groups. The results were used to:

1. gauge the consumers' receptivity to user fees in general
2. gain information on the priorities of quality improvements to determine which areas of health care delivery are truly important to consumers and to focus investment on these areas
3. determine whether and how much consumers would be willing to contribute to these health delivery improvements
4. make recommendations for specific, feasible quality improvements over the short, intermediate, and long terms which will induce patients to utilize government health care facilities when fees are instituted.

The results of this study are found in:

▲ "Quality of Health Care in Relation to Cost Recovery in Fiji: Focus Group Study Report" (September 1993).

## HAITI DOCTORS SURVEY

**Why Created?:** The Haiti Doctors Survey was created to assess three primary concerns:

1. how doctors feel about Bon Repos hospital (HBR)
2. whether they would be willing to use HBR
3. what would entice them to want to use HBR.

Since compensation is an obvious factor influencing doctors' willingness to use a facility, the interviews assumed that the compensation at HBR would be competitive and equivalent to alternative facilities.

**Instrument:** Questionnaires (in French) were given to 21 doctors practicing in the Port-au-Prince area. The doctors were selected to include four specialists, with the rest being generalists. All of the interviews were conducted by the same person (who in many cases knew the doctor being interviewed), and lasted approximately 30 minutes.

**Content:** The questionnaire consists of twenty questions. It asks the specialty of the doctor, where he/she works, the services he/she provides, the number of patients he/she has, the average income of these patients, whether or not the doctor price discriminates with respect to his/her patients, the fees he/she charges, whether or not the doctor performs means testing (for patients' ability to pay), thoughts and satisfaction levels of the health insurance of his/her patients, whether or not the doctor makes referrals to Bon Repos Hospital, and the doctor's feelings about Bon Repos Hospital, especially in regard to its distance from Port-au-Prince.

**Use:** The results can be found in the HFS Technical Note:

- ▲ "Operating Costs and Marketing Analysis for the Bon Repos Hospital" (September 1991).

## HAITI EMPLOYERS SURVEY

**Why Created?:** The Haiti Employers Survey was created to assess employers' and insurers' willingness to participate in the Health 2000 program (an HMO-type, pre-paid health insurance program)

**Instrument:** Questionnaires (in French) were given to twelve companies from four groups (services, manufacturing, tourism, and construction), three associations, and ten insurance providers. Specific companies were not randomly selected. The selection was designed to include companies within different industrial groups in the Bon Repos Hospital service area. The questions were asked of either the company managers or personnel managers, and the participating companies employed between 75 and 100 persons. This selected work force consists primarily of young employees, equally distributed between male and female.

**Content:** The questionnaire consists of 24 questions. It asks the person how many years the company has been in business, what its activities are, the number of its employees, the wages it pays, whether its employees are covered for health costs, whether the company is satisfied with its policy, whether the company has a clinic on its grounds, whether it has a contract with a doctor, whether it pays sick leave, the average medical cost per month for its employees, what benefits the company would like to provide its employees, for what reasons would the company like to have better insurance: image or better rapport with employees, for what reasons would the company *not* want to provide health insurance, whether or not the company is interested in group health insurance, whether the company is interested in insurance for preventive care, laboratory tests, outpatient care without medicines, outpatient care with medicines, and maternity care. The questionnaire also asks about employee/employer contributions, contingent valuation for improvements, and whether the distance between the firm and the hospital was of an acceptable distance.

**Use:** The results of this survey can be found in the HFS Technical Note:

▲ "Operating Costs and Marketing Analysis for the Bon Repos Hospital" (September 1991).

## HAITI HOUSEHOLD SURVEY

**Why Created?:** The household survey was created to assess the community patients' current health care expenditures, and knowledge of and attitudes toward the Bon Repos Hospital. The cost and marketing analyses were created to project the average expected per-ward and per-patient operating costs.

**Instrument:** Questionnaires (in French) were given to 100 households which appeared as if it were occupied by a family without significant means around the Bon Repos Hospital (HBR). Only those families where the head of the household worked in the informal sector were interviewed. A questionnaire code book is not available.

**Content:** The questionnaire consists of general questions about the household and about Bon Repos Hospital, with a total of 27 questions. The general questions asked for the number of people in the household, the gender and ages of its members, the occupation of the head of the household, other sources of income, and the average monthly household expenditure. The hospital questions asked whether anyone in the household was hospitalized within the last two years, which hospital they went to, the means of transportation to the hospital, and the cost of the visit. The questionnaire also asked whether the household had heard of Bon Repos Hospital, and if they had ever been to Bon Repos.

**Use:** A computerized model was used to predict future utilization costs and revenues for each of three population groups. This model anticipates the number of clients a hospital should expect, the number of beds required to satisfy this demand, and likely profits and losses for the hospital's population. The model also facilitates sensitivity analysis to determine the effect on patient load and profit from changes in prices, costs, or utilization. The results for this survey are found in the HFS Technical Note:

▲ "Operating Costs and Marketing Analysis for the Bon Repos Hospital" (September 1991).

## INDIA FACILITY, DOCTOR, AND PATIENT SURVEYS

**Why Created?:** The data collection effort contributed to an HFS Small Applied Research (SAR) report on public-private interaction in the health sector. The study examined the interaction between the two sectors in the area of sharing of labor resources.

**Instruments:** Questionnaires were developed for the three surveys (available in English). The facility questionnaire is made up of four sections and was conducted in 20 health facilities (10 public and 10 private) in Delhi, India. The definition of a health facility used in this survey included:

1. at least 4 beds
2. at least 1 out-patient center
3. at least one general physician for every 16 beds
4. an intensive care unit
5. at least 1 operating theater
6. at least 1 nurse for every 8 beds
7. at least 1 24-hour emergency ward
8. alternative power supply sources.

The physician questionnaire is made up of three sections. The sample size was 194 physicians selected from a target universe of 983 physicians which included physicians in the Delhi area with the following characteristics: 1. confirmed, full-time employees of the facility; and 2. were required to attend to patients in the out-patient centers at least one day a week.

The patient questionnaire is made up of six sections. The sample size was 1582 patients of the facilities in the facility survey.

**Content:** The first section in the facility survey focuses on staffing by departments. The second section focuses on out-patient and in-patient utilization by department and service and on the types of services offered in each facility. The third section focuses on payment systems and exemptions. The fourth section focuses on staff salaries.

The physician survey collected data on: 1. educational and other background information of the physicians; and 2. characteristics of the primary occupation of the physicians.

The patient survey collected data on: 1. patient and household identification; 2. socioeconomic status; 3. illness; 4. services received and choice of provider; 5. patient satisfaction; and 6. the payment system.

**Use:** The information gathered was used to write the following HFS Smaller Applied Research paper:

▲ "Multiple Job Holdings by Government Health Personnel in Developing Countries" (December 1994)

## KENYA EMPLOYER SURVEY

**Why Created?:** The Kenya Employer Survey, together with the Kenya Insurance Survey and the Kenya Provider Survey, constitute an HFS Small Applied Research study on using insurance to finance health services in Kenya. The study—and hence three surveys—was created to examine the potential for developing private and public health insurance schemes in Kenya. The study attempted to answer the following empirical and policy questions:

1. Against what types of illness expenses do Kenyans generally insure themselves? How do these differ across social groups?
2. What kinds of insurance market structures exist in urban and rural areas in Kenya? How do these structures affect geographical and social distribution of health insurance services?
3. What policy instruments need to be designed to promote the development of the insurance industry in Kenya? What further policies need to be pursued to ensure equity in health insurance coverage in the population? Are there incentives that the government can give to encourage the expansion of the insurance industry?

In an effort to empirically analyze these questions, a variety of survey instruments (employer, insurance, provider) were used to collect data on the types of insurance in the country, public policy on health insurance, the structure of rural and urban insurance markets, and types of health insurance coverage commonly purchased by the population. The survey, conducted between December 1992 and May 1993, was carried out in three districts: in Nairobi (two million people, home to most of the insurance firms in Kenya), in Nyeri (rural town of 100,000 people), and in Machakos (a peri-urban area of 80,000 people).

**Instrument:** Questionnaires were given to 111 medium and large firms (those employing at least 20 people) across several types: manufacturing companies, agro-based industries, transport firms, restaurants, banking, insurance, and health care providers.

**Content:** The questionnaire contains twenty questions, and it asks, among other things, general questions about the company and its health insurance: the name, location, nature, and ownership of the company; the number of employees; total wage bill; the existence and type of health insurance plan for employees. The questionnaire also directs questions to those firms who work with the National Hospital Insurance Fund (NHIF), which is a compulsory hospital insurance scheme for all employees earning above a certain wage. The NHIF questions consist of: When was NHIF started by your company? How many workers are covered? What is the total wage bill of the workers covered? How many claims did your company make under NHIF? What are the strengths, short-comings, and suggested improvements to NHIF? To those firms who work with other insurance schemes, the questionnaire asks: How many workers and what type of workers are covered by insurance schemes other than NHIF? How often are the premiums paid and how much? What types of health problems are covered? How many claims did your employees make under these schemes? Which companies have you insured with? What are the shortcomings and suggested improvements to these schemes? To those companies with no insurance schemes, the questionnaire asks: Why don't you have health insurance for your employees? Would you entertain health insurance schemes other than NHIF? What types of health problems would you like to see covered in the health insurance scheme? What mode of contribution would you prefer? Which institution would you like to see take responsibility for health insurance in Kenya—private insurance companies, government, parastatals, or NGO's?

**Use:** Results of the employer, insurance, and provider surveys are found in the Smaller Applied Research Paper:

- ▲ "Financing Health Services Through Insurance: A Case Study from Kenya" (October 1993).

## KENYA INSURANCE SURVEY

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**Instrument:** Questionnaires were given to all 38 registered insurance companies in Kenya, and 23 responded.

**Content:** The questionnaire contains 16 topic questions, and it asks the company, among other things: its name, location, composition of insurance company ownership (i.e. foreign, local), types of policies offered, plans to offer insurance in the future, determination of health insurance premiums, total value of health policies, demographics of client base, number and types of health insurance claims received, reasons for claims not being honored, average period for settling a claim, health insurance premiums as a proportion of annual insurance premiums, perceptions of potential for health insurance in Kenya (by urban and rural), potential constraints in the provision of health insurance, description of current health insurance market in Kenya, method of selling insurance (i.e. agents, brokers), problems encountered with selling insurance through agents, commission level given to agents/brokers, determination of commission, and the market share of the top five health insurance companies in Kenya's health insurance industry.

**Use:** Results of the employer, insurance, and provider surveys are found in the Smaller Applied Research Paper:

- ▲ "Financing Health Services Through Insurance: A Case Study from Kenya" (October 1993).

## KENYA PROVIDER SURVEY

**Why Created?:** The Kenya Provider Survey, together with the Kenya Employer Survey and the Kenya Insurance Survey, constitute an HFS Small Applied Research study on using insurance to finance health services in Kenya. The study, and hence the three surveys, was created to examine the potential for developing private and public health insurance schemes in Kenya. The study attempted to answer the following empirical and policy questions:

1. Against what types of illness expenses do Kenyans generally insure themselves? How do these differ across social groups?
2. What kinds of insurance market structures exist in urban and rural areas in Kenya? How do these structures affect geographical and social distribution of health insurance services?
3. What policy instruments need to be designed to promote the development of the insurance industry in Kenya? What further policies need to be pursued to ensure equity in health insurance coverage in the population? Are there incentives that the government can give to encourage the expansion of the insurance industry?

In an effort to empirically analyze these questions, a variety of survey instruments (employer, insurance, provider) were used to collect data on the types of insurance in the country, public policy on health insurance, the structure of rural and urban insurance markets, and types of health insurance coverage commonly purchased by the population. The survey, conducted between December 1992 and May 1993, was carried out in three districts: in Nairobi (two million people, home to most of the insurance firms in Kenya), in Nyeri (rural town of 100,000 people), and in Machakos (a peri-urban area of 80,000 people).

**Instrument:** Questionnaires were given to 19 health care providers, primarily those providers whose services are paid through an insurance scheme. The data collection effort was restricted to hospitals, health centers, and dispensaries.

**Content:** The questionnaire contains 15 questions, and it asks for information on: general characteristics of the hospital, health center, or dispensary (i.e. name, location, type of facility). The questionnaire also asks questions specifically of the respondent: position, volume of patients over the last year, consultation fee, and daily rate. The questionnaire goes on to ask questions about the National Hospital Insurance Fund (NHIF): how many patients pay their bills through NHIF, the types of organizations these patients came from, proportion of revenue from NHIF, and trends in this revenue stream. The questionnaire also asks about insurance outside NHIF: how many patients pay their bills through insurance other than NHIF, proportion of revenue from other health insurance companies, which services are generally paid through insurance, proportion of revenue by payer type, trends in this revenue stream, and methods of payment for hospital bills.

**Use:** Results of the employer, insurance, and provider surveys are found in the Smaller Applied Research Paper: "Financing Health Services Through Insurance: A Case Study from Kenya" (October 1993).

## KENYA FACILITY SURVEY

**Why created?:** Since the late 1970s, the government of Kenya has regarded Primary and Preventive Health Care (P/PHC) as an efficient and cost-effective means of providing health care to the population. However, the provision of P/PHC is hampered by insufficient staff, drugs, supplies, transportation, and other resources, which constrain existing P/PHC facilities from operating at full capacity. The main objective of the P/PHC Resource Gap study was to estimate the additional financial resources required for the Ministry of Health to operate its P/PHC system at full capacity. this "gap" in funding was measured by determining the funding required for full operation of the P/PHC system and subtracting the current level of expenditure from it. The study also developed a mechanism to monitor the shift of resources in the MOH recurrent budget toward P/PHC.

**Instrument:** The survey was designed to determine resource use in several discrete categories representing major components of operations: staff, drugs, other supplies, equipment and maintenance, transport, building maintenance, and in-service training. In addition information was collected to determine annual recurrent uses of resources and capital investment needs. Copies of the survey instruments (in English) are included in the appendix of the report named below. The survey covered a nationally representative random sample of approximately five percent of MOH facilities. The instruments were pre-tested in Kiambu district at four facilities. A list of all facilities surveyed is included in the appendix of the report.

**Content:** The approach used in this study was to survey a sample of MOH facilities providing P/PHC to determine their resource use and the extent to which lack of resources constrains their ability to provide services. The study examines the efficiency of existing operations rather than appropriate levels of service delivery. The survey was also implemented at some NGO facilities which are considered to be operating without serious resource constraints. The survey is a rich source of data which provides a good baseline description of primary health care facilities in Kenya. It is valuable for addressing other questions of facility operation for the MOH and the donor community.

**Use:** Information from this survey, other studies, and norms obtained from the MOH and elsewhere were used to determine the appropriate mix of resources to be used in providing P/PHC services. The results of this survey are used in a planning program using a computer spreadsheet. This program contains information about unit costs for full capacity, current expenditures, and numbers of facilities. It can be used to forecast the cost of expanding MOH facilities and estimate the resulting gap in funding. The following report containing the results of the survey also suggests other uses for the data:

▲ "Kenya Ministry of Health Preventive and Primary Health Care Resource Gap Study" (October 1990)

## KENYA AND NIGERIA FOCUS GROUP STUDIES

**Why Created?:** The Kenya and Nigeria Focus Group Studies were part of a data collection effort for studying the economic impact of malaria in Kenya and Nigeria. The focus group discussions provided both qualitative and quantitative information about people's perceptions of malaria, usual sources and costs for services and medication to treat malaria, and malaria prevention activities. Findings from these discussions were used to estimate the effect of malaria on work and productivity related to adult episodes and episodes for which workers take time off to take care of children sick with malaria.

**Instrument:** Each focus group was occupationally homogeneous, with five to seven members, all of whom were workers at the same occupational level and engaged in the same or a similar activity. The focus group sample included men and women workers and managers in the agricultural, service, and industry sectors, including small farm agriculture, agribusiness, schools, factories, and small commercial and service occupations.

**Content:** Using local interviewers, HFS conducted 11 focus group interviews in Kenya and 27 in Nigeria in a total of three weeks' time in each country. In Nigeria, all focus group interviews were conducted in Ibadan and surrounding rural areas in Oyo State. In Kenya, the interview sites were in a coastal area and a mountainous lake area (Kilifi and Kisumu, respectively), an integrated area in the highlands (Mwea), and a Rift Valley site (Eldoret).

**Use:** HFS combined the estimates of impact on worker productivity with wage and other economic data to assess malaria's economic impact at the national and sectoral level, for urban and rural populations, and for men, women, and households. The findings are reported in the Major Applied Research study:

▲ "Economic Impact of Malaria in Kenya and Nigeria" (November 1993)

## NIGER HOUSEHOLD SURVEYS I & II

**Why Created?:** The two household surveys were part of an evaluation of a cost recovery pilot test project implemented by The Government of Niger in the non-hospital sector in two districts—Boboye and Say. The project was designed to test two different payment methods along with interventions for the improvements of quality of care. The surveys looked at health care seeking behavior before and during the implementation of the pilot test.

**Instrument:** The survey instruments were questionnaires (available in English and French) consisting of four modules for the baseline survey and five modules for the follow-up survey. The sample for the baseline survey consisted of 1,836 households with 13,667 individual respondents. The sample for the follow-up survey consisted of 1,834 households with 13,049 individual respondents.

**Content:** The baseline questionnaire consists of four modules:

1. Household module. This module serves two objectives:
  - a. identify the sick persons; and
  - b. gather information on the socioeconomic characteristics of individual household members and on household income.
2. Curative care module. This module is administered to individuals that state that they are ill or injured in a two week recall period, and the objectives are to obtain
  - a. a description of illness; and
  - b. a description of the type of care selected and the amount spent to cure the illness, either in money or in kind.
3. Preventive care module. This module focuses on two activities:
  - a. enrollment in prenatal care programs by pregnant women; and
  - b. vaccination record for children.

The follow-up survey includes the same four modules described above and a fifth module on the willingness to pay for treatment and the preferences between different payment methods.

**Use:** A series of reports have used the data to evaluate the pilot test:

- ▲ "Patterns in the Use of Healthcare: Comparative Analyses of the Household Survey on Demand for Healthcare in Three Districts of Niger (May 1994)
- ▲ "Econometric Analysis of Demand For Outpatient Care in Niger" (September 1994)
- ▲ "Cost Recovery and Improved Drug Availability: Implications for Total Patient Treatment Costs" (December 1994)
- ▲ "Social Financing and Fee-Per-Episode of Illness Payment Methods in Niger" (December 1994)
- ▲ "Evaluation of the Impact of Pilot Tests for Cost Recovery on Primary Healthcare in Niger (October 1994)

## **NIGER FACILITY SURVEY**

**Why Created?:** The Niger Facility Survey was a part of an evaluation of a cost recovery pilot test project implemented by The Government of Niger in the non-hospital sector in two districts—Boboye and Say. The project was designed to test two different payment methods along with interventions for the improvements of quality of care. The survey looked at facility utilization, utilization of medicines, revenue generation, and costing.

**Instrument:** The survey instrument was a questionnaire (available in French and English) consisting of three modules. The sample for the survey consisted of all the public facilities in the pilot test areas.

**Content:** Monthly data from May 1993 till February 1994 was collected on the following:

- ▲ Drug consumption by type and value
- ▲ Drug stock-outs
- ▲ Utilization numbers (data from April 1992 to February 1994):
  - First visits for ailments
  - Return visits
  - Prenatal care and child care
- ▲ Revenues

**Use:** The information was used to write the following reports:

- ▲ "Pilot Tests on Cost Recovery in the Primary Care Sector: Data From the Public Health Facilities in Niger" (May 1994)
- ▲ "Evaluation of the Impact of Pilot Tests for Cost Recovery on Primary Healthcare in Niger (October 1994)

## **NIGER FACILITY AND PATIENT SURVEY**

**Why Created?:** This data collection activity was the second phase (field work/data collection) of the Major Applied Research agenda for the Quality of Care topic. Quality of Care is one of nine major applied research (MAR) topics identified by the Health Financing and Sustainability (HFS) Project in its applied research agenda.

**Instrument:** The survey instrument was a questionnaire (available in French and English) consisting of three modules. The sample for the survey consisted of all the public facilities in the pilot test areas.

**Content:** The first module is made up of five parts:

1. availability of facility equipment
2. training of staff
3. availability of vaccines and contraceptives
4. availability of documentation on medical guides and bookkeeping
5. calendar of activities for facilities

The second module focuses on the behavior of the health professionals at the facilities towards patients and includes questions on:

1. reception by staff
2. communication with patients
3. taking vital signs
4. clinical examination
5. decision making
6. use of documentation on procedures

The third module asks patients about the treatment they received and the improvements in the facilities and in the quality of care received.

**Use:** The information was used with data from Senegal to write the following report:

- ▲ "Quality of Health Care and Cost Recovery in Africa: Evidence from Niger and Senegal" (October 1994)
- ▲ "Evaluation of the Impact of Pilot Tests for Cost Recovery on Primary Healthcare in Niger (October 1994)

## PAKISTAN EMPLOYER SURVEY

**Why Created:** The Pakistan Employer Survey was created to provide data for the study of development of private health insurance based on managed-care principles. This study was one part of a comprehensive Technical Assistance work in Pakistan for the HFS Project, which was assisting the Federal Ministry of Health of Pakistan. In general, the survey of employers helped to gauge employers' interest in managed care. The specific objectives of the survey were:

1. to obtain information on current health benefits provided by the employers in the two cities surveyed
2. to ascertain the most recent year's expenditures on employee health care
3. to assess employers' reactions to and views about a managed-care health insurance product, and their interest in acquiring this type of insurance were it available in their local market
4. to provide potentially interested insurers with a model of a managed-care health insurance plan which could be marketed in Pakistan.

**Instrument:** The survey's instrument was a questionnaire (available in English) consisting of 15 questions. Questionnaires were distributed to 52 organizations in the cities of Karachi and Islamabad, with 38 organizations responding. Regarding type of ownership, the responding organizations were evenly distributed across multinational (or foreign), state owned, and private (Pakistani) organizations. Regarding type of personnel in the responding organizations, the distribution was one-third management and two-thirds unionized.

**Content:** The services and benefits described to the employers are:

1. ambulatory services including primary care, specialist care, diagnostic services, and drugs
2. inpatient professional services including surgery, obstetrics, anesthesia, and psychiatry
3. health promotion services including family planning and health education.

Some services and benefits which were excluded from the package were dental, eye wear, and non-prescription drugs.

**Use:** The information was used in writing the report:

▲ "Policy Options for Financing Health Services in Pakistan, Volume IV: Development of Private Health Insurance Based on Managed-Care Principles" (September 1993)

## PAPUA NEW GUINEA INSURANCE SURVEY OF EMPLOYERS

**Why Created?:** The Papua New Guinea Insurance Survey ran from October 29 to November 30, 1993. The National Department of Health wants to expand private health insurance in order to lighten the financial burden on the public sector for providing health services. A survey of employers based in Port Moresby was conducted to ascertain their level of interest and support for a managed care plan, so as to determine the feasibility of managed care in PNG, as a whole. The twenty employers surveyed consisted of both large and small organizations, state-owned and private organizations, and multinational/foreign companies.

**Content:** The insurance survey of employers was developed to address six specific reasons:

1. To obtain information on current health benefits provided by the employers and to determine if these benefits extend coverage to employee dependents
2. To determine if the employer contract for health services is with private practitioners or hospitals
3. To estimate the yearly expenses borne by employers for medical services for their employees
4. To assess which types of health insurance employers make available to their workforce
5. To appraise employer reaction to the proposed managed care plan, and their interest in acquiring this type of a plan if it were available in Port Moresby
6. To find out how employers would react to sharing the cost of premiums for the proposed plan and to measure their reaction to the introduction of mandatory legislation requiring them to provide compulsory health benefits for their employees.

**Instrument:** The survey's instrument is a questionnaire, consisting of twenty questions. This questionnaire was given to either the company's chief executive, financial controller, or personnel manager. The employer questionnaire asks general questions about the company and the health benefits that it offers its employees. The questionnaire then highlights a proposed medical insurance plan and asks the employer if it would offer such a plan in place of its existing plan, given various conditions. The questionnaire describes how a managed care plan works, and summarizes the benefits of the model managed care plan, including preventive health services, outpatient (ambulatory) benefits, and hospitalization (inpatient) services and exclusions under the proposed plan.

**Use:** The results of the employer survey are found in the Technical Note:

- ▲ "Expansion of Private Health Insurance in Papua New Guinea" (January 1994).

## PAPUA NEW GUINEA INSURANCE SURVEY OF INSURANCE COMPANIES

**Why Created?:** The Papua New Guinea Insurance Survey ran from October 29 to November 30, 1993. The National Department of Health wants to expand private health insurance in order to lighten the financial burden on the public sector for providing health services. The initiative is designed to stimulate the expansion of private health insurance using managed care principles. The study's central focus is to assess the potential for private health insurance in the largest urban and industrial center of PNG—Port Moresby.

**Content:** The primary purpose of the insurance company survey, in particular, is to determine the nature of existing private health insurance products available in the market, the size of this market, and the level of interest among insurers to promote a managed care type plan.

**Instrument:** The survey's instrument is a questionnaire, consisting of twenty questions. This questionnaire was given to either the company's chief executive, financial controller, or personnel manager. The insurance company questionnaire asks general questions about the company, including what type of insurance (i.e. life, accident, health, fire) and what type of health insurance (i.e. indemnity, managed care plan) it markets. The questionnaire also asks how many subscribers are enrolled in the company's health insurance, the annual premium it collects, and method of reimbursement. The questionnaire goes on to ask area specific questions: whether or not the company markets services in the Port Moresby area, the major concerns the company has about the expansion of health insurance in PNG, the existence of legislative or financial constraints which may impede expansion of health insurance in PNG, and what kind of incentives the government of PNG could propose to stimulate the expansion of health insurance.

**Use:** The results of the survey are found in the Technical Note:

▲ "Expansion of Private Health Insurance in Papua New Guinea" (January 1994).

## PAPUA NEW GUINEA INSURANCE SURVEY OF PROVIDERS

**Why Created?:** The Papua New Guinea Insurance Survey ran from October 29 to November 30, 1993. The National Department of Health wants to expand private health insurance in order to lighten the financial burden on the public sector for providing health services. The survey's instruments consist of three separate questionnaires—for 1. employers, 2. insurance companies, and 3. health providers—with about twenty questions each. The survey was created to assess the health insurance market and to make near- and long-term recommendations for expansion and improvement. It was created to gauge the interest in private health insurance through a managed care health plan in the largest urban and industrial center of Papua New Guinea—Port Moresby.

**Content:** The provider survey, in particular, was created to measure the capacity of health care providers (hospitals and clinics) to support expansion of health insurance in PNG.

**Instrument:** The provider questionnaire asks general questions about the provider, such as whether it is a hospital or a clinic, the number of people on its medical staff, and its total revenue for each of the past three years broken down by payer source (i.e. self-pay, third party, or free care). The questionnaire then asks more specific insurance questions:

1. Does the provider service any of the health insurance policy holders?
2. Does the provider bill and collect directly from the insurance companies for services provided to its policy holders?
3. What are the names of insurance companies who contract directly with the provider?
4. Is the provider satisfied with the health coverage benefits provided by the insurance companies to its policy holders?
5. Is the provider able to bill the user for the total services rendered?
6. Is the provider willing to invest in costs necessary for insurance programs?

**Use:** The results of the survey are found in the Technical Note:

- ▲ "Expansion of Private Health Insurance in Papua New Guinea" (January 1994).

## PERU HOUSEHOLD SURVEY

**Why Created?:** The Peru Household Survey was used by HFS to assist the USAID Mission with the design of a project. The survey was created to obtain an estimate of incomes and utilization of and expenditures on health services among high-, middle- and low-income people in three districts (Arequipa, Puno, and Lambayeque), which together constitute 13 percent of Peru's population.

**Instrument:** The survey's instrument was a questionnaire, administered to 300 households, 100 in each of three districts. The survey was administered by Cuanto, a local consulting firm. Cuanto used five employees in each city, over a span of four days. The HFS team chose households to complete the questionnaire by estimating to which income category the household belonged. Twenty households in the high-income category, 40 in the medium-income level, and 40 in the low-income level responded. Both the questionnaire and codebook are available in Spanish.

**Content:** The questionnaire petitions for information on the general characteristics of the household, which health services it depends on, the frequency and duration of hospitalizations, the health status of the household members, the amount of money spent on health care, and whether or not the household uses contraceptives.

**Use:** The results of the survey are found both in the codebook itself (attached to the questionnaire) and in the Technical Note:

▲ "Economic Analysis of the Strengthening Health Institutions Project" (August 1994).

## SENEGAL PUBLIC FACILITY SURVEY

**Why Created?:** Both the Senegal Public and Private Facility Surveys were part of an HFS Major Applied Research (MAR) No. 11 effort, which was conducted at the request of Senegal's Ministry of Health and Social Affairs with financial support from USAID/Dakar. These studies were intended to provide information to help diagnose problems and formulate reform in the health sector. The public facility survey analyzes the costs, financing, and efficiency of public health care providers in Senegal and is a twin of the prior study of the private system for health care delivery. The specific aims of the public survey were to:

- ▲ understand the role and performance of public health care providers
- ▲ compare their performance with that of private facilities
- ▲ explore the potential advantages of greater public-private collaboration in providing and financing health services in Senegal.

**Instrument:** The HFS team drew a sample of 83 public providers from around the country to obtain a nationwide representative set. Very similar questionnaires (available in French and English) were given to both the private and public providers. Since more than one organization created these questionnaires, and since different questionnaires were distributed at different times, the collection of questionnaires is somewhat convoluted and difficult to decipher.

**Content:** The Public Facility questionnaire contains three main modules: quality, utilization and finance. Under the finance module, there exists five sub-modules: 1. questions asked directly to hospitals, 2. questions asked of health posts, 3. questions asked of health centers, 4. questions asked of health huts (run by village health workers; set up by USAID), and 5. questions on the inventory of drugs, equipment and supplies. A separate module is the data collector's guide for the health center.

The module on quality is nearly identical to the quality questionnaire used in the Senegal Private Facility Survey. This module is very extensive and detailed and it contains many sub-modules. It asks questions about the quality of equipment, of personnel, of medicines, of services offered, of general procedures before treatment of fever, of procedures before treatment of diarrhea, of a visit for family planning purposes, of the procedures for reception and preparation of a childbirth delivery, and of preparation for surgery and preparation of the surgical equipment. The questionnaire also asks outpatients about their perceived quality of care received at the health facility. It asks facility personnel about the quality of services at the facility. It asks patients more general questions about the facility (i.e. accessibility, reputation, professional advice received).

The utilization module asks, among other things, for the number of inpatient and outpatient visits to the facility, across different departments. It asks for the amount of money spent on a number of very specific drugs, and for the amount of money spent on detailed equipment and personnel inputs.

**Use:** This data is used to compare the performance of public and private providers and to explore the policy question: whether health system efficiency could be enhanced by expanding the role of the private sector in the production of health services. The results of both the public and private surveys were used to write the Major Applied Research Papers:

- ▲ "Costs, Financing, and Efficiency of Government Health Facilities in Senegal (August 1994)
- ▲ "Costs, Financing, and Efficiency of Health Providers in Senegal: A Comparative Analysis of Public and Private Providers" (September 1994).

## SENEGAL PRIVATE FACILITY SURVEY

**Why Created?:** Both the Senegal Public and Private Facility Surveys were part of an HFS Major Applied Research (MAR) effort, which was conducted at the request of Senegal's Ministry of Health and Social Affairs with financial support from USAID/Dakar. These studies were intended to provide information to help diagnose problems and formulate reform in the health sector. The private facility survey analyzes the costs, financing, and efficiency of private health care providers in Senegal and is a twin of the latter study of the public system for health care delivery. The specific aims of the private survey were to:

- ▲ understand the role and performance of private health care providers
- ▲ compare their performance with that of public facilities
- ▲ explore the potential advantages of greater public-private collaboration in providing and financing health services in Senegal.

**Instrument:** The HFS team drew a sample of 60 private providers from around the country to obtain a nationwide representative set. Very similar questionnaires (available in French and English) were given to the private and public providers. The private facility questionnaire contains modules on quality and utilization. The quality module was nearly identical to that used in the Senegal Public Facility Survey.

**Content:** The quality module is very extensive and detailed and it contains many sub-modules. It asks questions about the quality of equipment, of personnel, of medicines, of services offered, of general procedures before treatment of fever, of procedures before treatment of diarrhea, of a visit for family planning purposes, of the procedures for reception and preparation of a childbirth delivery, and of preparation for surgery and preparation of the surgical equipment. The questionnaire also asks outpatients about their perceived quality of care received at the health facility. It asks facility personnel about the quality of services at the facility. It asks patients more general questions about the facility (i.e. accessibility, reputation, professional advice received).

The module on utilization asks for the number of visits for specific curative care procedures to specific health specialists (doctor, nurse, mid-wife, other) within the last year. The utilization module also asks about preventive care visits, about health education campaigns, and about the price and quantity obtained for 287 different drugs. This module also asks about salaries of personnel, about investments in materials across different departments, about building costs, sources of financing for both the variable and fixed indirect inputs (costs) which allow the facility to function, the co-payment structure, and the percentage of non-paying clients.

**Use:** This data is used to compare the performance of public and private providers and to explore the policy question: whether health system efficiency could be enhanced by expanding the role of the private sector in the production of health services. The results of both the public and private surveys were used to write the Major Applied Research Paper:

- ▲ "Costs, Financing, and Efficiency of Health Providers in Senegal: A Comparative Analysis of Public and Private Providers" (September 1994).

## SENEGAL AND TANZANIA PROVIDER SURVEYS

**Why Created?:** The two surveys were in support of Major Applied Research on the private sector development. The purpose is to better understand the factors that help or hinder the development of different elements of the private sector in the provision of health services in Senegal and Tanzania.

**Instrument:** A flexible questionnaire was developed and pretested in both countries (available in English, French, and Swahili)

**Content:** Providers were asked about the factors determining their decision to enter the private sector, the day-to-day constraints, and their ideas regarding the growth of the sector. More specifically, information was collected from providers in the for-profit and the not-for-profit sectors on issues such as: the effect of taxes and subsidies on provision, the effect of government regulation relating to labor and other inputs of production, the financial constraints in the market for expansion and start-up activities, the type of services provided by the private sector, and the nature of the demand for health services by the population.

**Use:** The information contributed to the writing of the following reports:

- ▲ "Private Sector Delivery of Health Care in Tanzania" (February 1995)
- ▲ "Private Sector Delivery of Health Care in Senegal" (December 1994)

## URUGUAY COST/UTILIZATION SURVEY

**Why Created:** The Uruguay Cost/Utilization Survey was part of an HFS Small Applied Research effort. The survey was created to estimate the effects of population aging on costs and utilization of hospital services. It focused on expected changes over the next two decades for the Centro de Asistencia del Sindicato Medico del Uruguay (CASMU), a health care organization in Uruguay. The specific objectives of the survey were to:

1. identify expected changes in the age and sex composition of the membership of a specific Uruguayan health care organization over the next couple of decades
2. estimate the effects of these changes on the utilization of overall hospital services, and specifically those for cerebro/cardiovascular disease and tumors over the same period
3. estimate the effects of changes in utilization on health care costs by age category, sex, and diagnosis
4. suggest the implications of the results for CASMU's health care programs and policies.

**Instrument:** Unlike that of most other HFS surveys, the Uruguay Cost/Utilization Survey's methodology did not employ a questionnaire. Rather, the HFS team simply accessed the CASMU data file during a two-week visit in June of 1992. The management of CASMU invited the HFS team to examine utilization records both for hospital inpatients and for outpatient visits to CASMU member physicians.

**Content:** The data file includes information on each hospitalized patient's age, sex, principal and secondary diagnoses, symptoms of illness, surgical procedures, diagnostic tests, duration of hospitalization and/or number of outpatient consultations, condition at termination of treatment and, if applicable, cause of death.

Data are available by month and year from approximately 1982 to the present (although coding and data entry are complete only through May of 1992). These data are stored on magnetic tape and can be accessed and manipulated easily through standard software programs. The unit of record for these data is the episode of hospitalization per patient, identified by the date of admittance. The individual hospitalized patient files do not contain actual or estimated costs of the services provided. Rather, expenditures are reported each trimester, and summarized annually, in aggregate form. They are presented in current prices (New Pesos) in terms of several categories, including service site, type of service, and type of expenditure. Summary figures reported are the monetary values for the various cost components, cost per patient, and cost per bed-day of occupancy. Although some data was available for outpatients, this data lacked information on age-sex composition and diagnosis. Therefore, the study focused on hospitalized patients. Cost data are available for approximately the same period as the patient data and are also stored on magnetic tape. Examination of these data indicate that they are relatively complete and internally consistent.

**Use:** The results of both the population and costs projections as well as policy options are found in the Smaller Applied Research paper:

▲ "The Effects of Population Aging on Health Care Utilization and Costs for the *Centro de Asistencia del Sindicato Medico del Uruguay* (CASMU)" (August 1993).